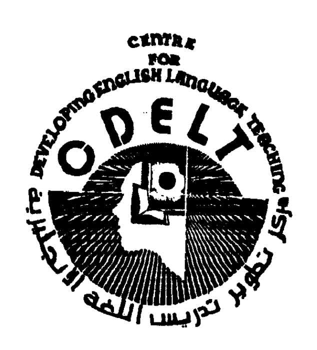
CDELT Creativity Project



The History of Creativity in Egyptian Education

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Creativity is the human ability
to establish relations
for the **purpose** *of changing*
reality

Man is a **creative** *animal*

History moves from a **Pro Quo**
to a **Status Quo**

Mourad Wahba

Foreword

In the twentieth century, education in Egypt has witnessed two major reform movements. The first movement was introduced by Taha Hussein, Egypt's foremost pioneer of Enlightenment, when he was Minister of Education in 1936. In his book ***The Future of Culture in Egypt***, he gave a detailed strategy of educational reform based on his theory of a Mediterranean Culture which connects Egypt and Europe. Hussein called for a modern education based on creativity within the spirit of rationalism and scientific thinking. He proposed that this could only be realized if Egyptians become tolerant towards other cultures by adopting a relativistic outlook to life. However, he maintained that the precondition for such tolerance, which could lead to creativity, is that Egyptians would have to rediscover their mediterranean cultural roots by reinterpreting their history and culture within the perspective of one unified Mediterranean Culture. This, in turn, would make them revive their lost equality with Europeans.

Finally, Taha Hussein announced another precondition for reform, namely, the democratization of education in his much quoted historic slogan "Education is like air and water". Thus, Taha Hussein was heralding a new era of mass education.

Taha Hussein's call for the democratization of education was realized almost twenty years later by President Gamal Abdel-Nasser. However, the revolutionary side of Hussein's call, namely, creativity and equality with European Culture, was aborted. Accordingly, English as a foreign language, was abolished from the primary level of state schools.

Taha Hussein's aborted call for creativity in education was revived fifty years later, in 1986, by the second reform movement led by Dr. Fathi Sourour then Minister of Education and currently Speaker of the People's Assembly, (Egypt's Upper House of Parliament).

In the conclusion of the second edition of his book entitled ***Towards Educational Reform in Egypt,*** Dr. Sourour put creativity as the axis round which educational reform should pivot. This was the result of the seminar on `Creativity and General Education' organized by the Faculty of Education, Ain Shams University, and the National Centre for Educational Research and Development. The seminar was coordinated by Professor Mourad Wahba in 1989, the author of this research document.

The seminar was the culmination of a two-year research project headed by Professor Mourad Wahba. Through a long history, told hereafter in detail, Wahba was able to establish and synthesize the relation between the call for mass education and that of mass creativity. Wahba established this relation through the concept of creativity which he formulated as: the ability of human reason to establish new relations for the purpose of changing reality. This creative synthesis, namely, establishing a new relation between Taha Hussein and Fathi Sourour's strategies for educational reform, is outlined in this research document in detail.

The current Minister of Education, Dr. Hussein Kamel Bahaa-Eddin is adopting an integrative approach to educational reform which deals with the educational system as one unified whole. Within this new policy of reform, creativity still plays a pivotal role as opposed to rote learning and mere memorization of knowledge.

Dr. Hussein Kamal Bahaa-Eddin is carrying on the pathway of creativity in education within the ongoing international dramatic changes. In this context, Dr. Bahaa-Eddin has announced that educational reform is a matter of national security because it is the only safety valve that can protect Egypt. By promoting creativity within the educational system, Egypt's future generation will be more open to diversity of thought. This would make them more tolerant towards other cultures. In this way, Egypt's future generation could become equal

participants in the production of thought and science instead of being mere consumers. Therefore, Dr. Bahaa-Eddin called for the necessity of introducing three core subjects into the educational system: English, Science and Mathematics. The unifying element in these core subjects, which he calls the subjects of the future, is creativity.

This historical background is essential in explaining the rationale for publishing this research document by CDELT. Recently CDELT, under its new administration, has adopted creativity as the theoretical foundation of its policy for the development of English language education.

In this manner, CDELT hopes to play a substantial role in implementing the new policy of educational reform in Egypt by fostering creativity in English language education. This book is only the beginning.

Dr Mona Abousenna
Director, CDELT

Philosophical Premises

My interest in creativity started in 1976 when I presented a research paper to the First International Week on the Philosophy of Art at Cephalonia in Greece entitled *The Human Mind and Artistic Creativity.* In that paper, I concluded that the term intelligence is not a scientific one whether it is defined as the ability to adapt with the environment or as the ability to establish new relations. The first definition means that human reason is passive whereas reason is positive because the human being transcends nature. The second definition means that intelligence is not separately identified from reason because establishing new relations is a mental operation. Therefore, there is no need for this doubling between intelligence and reason. Since reason is able to establish new relations it, therefore, transcends the Status Quo and is creative.

In 1978, I presented another research entitled *The Philosophical Basis for Education* at the Second Conference of Arab Educationalists in Baghdad. In this article, I first coined the major distinction between what I called ***the culture of memory*** and ***the culture of creativity*** for the purpose of changing the educational system. In its present form, I argued, the educational system produces the culture of memory which judges the ability to memorize as in itself evidence for intelligence. All intelligence tests used by psychologists revolve round testing the intelligence of the human being in his ability to recall the past or to conceptualize it.

Therefore, there is some contradiction between the faculty of memory and the faculty of the creative reason. To eliminate this contradiction is not possible unless the methods of teaching get revised. The existent teaching methods do not aim at developing the faculty of creativity but rather at developing the faculty of memory because they are based on the principle of certainty. This principle states that for every question there is only one answer which is true. It

is striking that the function of education now is one of making sure that every student knows the correct answer. Consequently, it is not the right of the student to doubt the principle of certainty. Hence, the principle, not only dominates the curriculum, but also governs the behaviour of students.

In 1984, I presented a paper entitled: *Creativity: Ideological or Cultural* at the twentieth conference of the French-speaking Philosophical Societies in Quebec, Canada. The major idea of the paper deals with the organic relation between creativity and the future, or strictly speaking, between creativity and the ***Pro Quo*** which is a term I coined to explain my concept of creativity. Creativity is the embodiment of the future and not the extension of the past via the present. So, the past or the present is the ***Status Quo*** which is transcended by a ***Pro Quo.*** Transcendence is, by necessity, a creative act. The object created is a new phenomenon which is preceded by an intention. This intention is not a cause because the effect cannot transcend the cause. If it does not transcend the cause therefore, it is not new. Consequently, creativity is transcendence that is given as a project thrown into the future. And this project, or strictly speaking, this ideology is converted into a culture when embodied into reality.

However, when culture changes into a dogma, the futuristic view gets eliminated and consequently creativity suffers the same elimination. Dogmatism leads man into the illusion that absolute truth is his own monopoly. Hence, dogmatism blocks out any interpretation. The proof of the above statement is that scientific creativity necessarily clashes with dogmatism and the history of science has Galileo as a classic example of such a conflict. For this reason, creativity is concomitant with de-dogmatization. This means that if we sincerely want to develop interpretation in the coming generation of students we have to initiate them into a creativity oriented mentality.

Creativity in education involves divergent thinking which is based on the possibility of multiple answers, whereas convergent thinking requires only one answer based on rote memorization. The paradox between divergent thinking and convergent thinking is that the latter is usually associated with a high percentage of intelligence whereas the former is associated with a low percentage of intelligence. I believe that this paradox is illegitimate because it means that high intelligence is an obstacle to the process of creativity. So, if what is built on the illegitimate is illegitimate then, intelligence is an illegitimate concept, hence it is unscientific and ultimately it is an illusion. Consequently, creativity remains as the human feature of human reason or mankind per se irrespective of any environment. It follows then, that man is a creative animal.

The Creativity Project

On June 15, 1986, Ain Shams university has approved a proposal I had presented concerning carrying out a research project with a team from the members of the Faculty of Education on "Creativity and General Education". A year later, we presented an interim report which reviewed the English and Arabic literature written on creativity. Enclosed with the report, I attached the philosophy of creativity as an article by the title of *The Logic of Creativity* which reads as follows:

It is curious that until the close of the nineteenth century no systematic attempts were made to investigate the phenomenon of creativity on a scientific basis. But the anomaly can be explained if we go back to the most influential philosopher of the first half of the eighteenth century, David Hume. Hume's system could be considered as the antithesis of anything in the nature of mental creativity. In his view (1960: 1-9) man's power of knowing is a very simple affair; first come the impressions made by the sensory stimuli, then follow the reproductions of impressions by memory or by imagination, and with the two processes - impressions and reproductions - the whole business of perceiving and

thinking is described and analyzed.

By the beginning of the twentieth century professional psychologists were starting to study the process of creativity. But this study was limited to artistic creativity. According to Freud (1914: 14), "the concept of unconscious psychic activity enabled us to get the first glimpse into the nature of poetic creativeness". He conceived of artistic creativity as the product of a regression to infantile modes of thought or experience. Consequently, Freud assigned a special role to art, as the product of a singular being capable of remaining in touch with his earliest period of life and embodying those early experiences in his art. Judging from the model of Leonardo Da Vinci, Freud concluded that the artist produces his major works of art out of contact between precipitating experience and memory of childhood.

However, Spearman's book entitled The Creative Mind which was published in 1930 could be considered the first book that tried to establish the principles of creativity in general and not with reference to art. They are three in numbers:

The first principle is the principle of apprehension of experience, that is, knowing one's own experience which converts the feelings into consciousness of feelings. But the defect of this principle is that it prevents the self from transcending itself; it affirms nothing more than the subjective experience.

The second is the principle of relation. When two or more items are given, a person may perceive them as related in various ways. Spearman himself is doubtful about regarding this principle as creative, for it only copies what had already existed.

The third is the principle of correlates. When an item and a relation to it are present in the mind, then the mind can generate in itself another item so related. Spearman says that this principle is the most inherently creative, and he

mentions the famous Test of Opposites. Words are read aloud, and to each of them the subject has to respond with its opposite. Thus, "good, tall, clumsy" will be answered with "bad, short and dexterous." Here, the word read out provides the given idea, whilst opposite indicates the given relations. The correlate idea is the response (13-26). However, in my own view, this principle is nothing more than mere remembering of past experience.

Anyhow, these are the three principles of creativity and their defects. In addition to these defects one can notice that Spearman's explanation of creativity has rested on the general principles of psychology. And that is why the closing words in his book Creative Mind run as follows: "The study of creativity and that of general psychology are at the bottom the same. Likely enough then, he who has not mastered the one will hardly go far aright in the other" (150).

But in my own opinion, these three principles of creativity can be reduced to the principle of sense data which is the fundamental principle of Logical Positivism but which does not however justify creativity; for creativity cannot be limited to sense data. The history of science confirms my own point of view. As a result of successive revolutions in physics, scientific theories are considered to be an outcome of the interference of the subject with the physical object under investigation.

However, in 1950 Guilford, at his presidential address to the American Psychological Association, recommended the initiation of research into the possibility of developing tests of creativity. Since then, creativity testing has been developed: but the interesting thing is that this development has come as a reaction against intelligence testing. The users of creative testing have taken, as their starting point, the view that the concept of intelligence has been overvalued, that it may have blinded psychologists to the potential ability of the individual, whose gifts do not lie in his I.Q. Getzel and Jackson's book, Creativity and Intelligence is based on the distinction between creativity and intelligence.

But this distinction complicates things. For intelligence itself is a doubtful concept (or strictly speaking, a myth) for two reasons: first, no one knows precisely what intelligence is. Second, any definition of the concept of intelligence is, at the same time, a definition of the concept of reason. For example, Binet defines intelligence as the capacity to make adaptations for the purpose of attaining a desired goal. Terman (quoted in Hines) defines intelligence as the capacity to carry on abstract thinking. But these definitions - both Binet's and Terman's - could be seen as definitions of reason. So why the doubling? Consequently, we should limit ourselves to reason and try to explore the relation between reason and creativity, rather than between intelligence and creativity. Put in this way, the issue of creativity is not an issue of psychology but of logic. Yet, the study of logic so far has failed to reveal the essence of creativity for three reasons:

First, it is noted that creativity is considered to be a rare phenomenon related to genius. And the creative genius is a mystery. Alex F. Osborn, in his book Applied Imagination published in 1953 and adopted by M.I.T., believes that creativity will never be a science. Much of it will always remain a mystery.

Second, logic puts reason into the context of argument, and the argument is an attempt to persuade or convince, and so presupposes that we already know what we would like others to accept.

Third, formal logic plays a role in annihilating the creative function of reason through the non-contradiction principle which has been transformed into an absolute formal criterion of truth, and accepted as the supreme principle of reason. In this sense, if a scientific theory is claimed to be true, then thinking based on its contradiction (as a possible truth) is inadmissible. And the reason for this inadmissibility derives from the ontological form of Aristotle's logic, being based on the "essence" or, strictly speaking, on what is permanent and unchangeable.

Consequently, if formal logic fails to reveal the essence of creativity, then we have to find a basis for establishing a logic of creativity which would be, in fact, the logic of reason.

In the preface to the Philosophy of Right, Hegel says: "To comprehend what is - this is the task of philosophy, because what is, is reason ... to recognize reason as the rose in the cross of the present, and thereby to enjoy the present, this is the rational insight which reconciles us with the actual" (quoted also in Marx, 1942: 208). Thus, according to Hegel, reason is applied within the horizontal relation of man to reality, whereas the real relation is the vertical one, that is, man's capability of transcending reality. There is a major difference between animal and man in their relation with the environment. The animal has a horizontal relation with the environment in the sense that the animal adapts to the environment and does not change it. Man, on the other hand, has a vertical relation with the environment because man can go beyond it and adapt the environment to satisfy his increasing needs. In order to achieve this, reason must be equipped with two categories: that of abstraction and that of relation. Due to abstraction, man goes beyond the environment (concrete) world. Due to relation, man makes links within abstractions in order to change the environment (concrete) world. In other words, man establishes new relations to transfer onto it the concreteness of the world around. This is the meaning of creativity: to discover new relations for the purpose of changing reality. As man's destiny is tied to the ability of changing the environment, man's destiny is necessarily tied to creativity. Therefore, creativity is neither a unique nor an accidental characteristic in man; rather, creativity is a feature of man or an inherent feature of the human reason. Thus, reason is endowed with two categories; the category of abstraction and that of relation.

In order to clarify these two categories Marx uses the example of the bee. He says "at the end of every labour process we get a result that already existed in

the imagination of the labourer in its commencement." Thus, human labour involves transcending actual reality, for the purpose of transforming it. And transformation, in this case, means creating new relations. In the German Ideology, Marx refers to the development of speech from the needs of human intercourse, and says of animals: "Where there exists a relationship, it exists for me. The animal does not relate itself to anything, it does not relate at all. For the animal, its relation to others does not exist as a relation" (1964: 47).

Consequently, reason operates not on facts per se but on facts in relation to other facts and in relation to itself. In this sense, knowledge is not a description of facts but an interpretation of facts. But this interpretation is not confined to speculation, but is rather linked to praxis, assuming that the essence of man lies in transforming reality. Thus, we can define reason as the faculty of practico-transcendental interpretation. And this definition involves a substantial relation between reason and creativity, to the extent that we could say that reason is creative by its very nature. And this means that the moment reason does not create, it is no more reason.

Now, the crucial question is, what prevents reason from being creative? There are two major obstacles: cultural taboos and the educational system. Cultural taboos prevent man from practising critical thinking, which is a prelude to transcending the status quo. And that is why creative people are those who have attempted to change belief and behaviour patterns to fit new experiences, independent of ancestral or authoritarian dictates.

In tackling the educational system, the distinction I first coined in 1978 between two types of cultures is very relevant. Our educational system is founded on the culture of memory. Most tests depend on memory, on closed books, on definite or right answers, that is, on the certainty principle. However, in creativity, what matters is not what, for example, Euclid's theories are, but rather how Euclid himself created his theories. The future of human

civilization lies with the culture of creativity and not with the culture of memory, if only because of Cybernetics. The task of Cybernetics is to eliminate exhaustive mechanical operations which only waste the brain and bring no creative joy. Thus, Cybernetics will indirectly create millions of new writers, artists, scientists and philosophers. In a word, we can say that Cybernetics will liberate what is inherent in human reason--creativity--or what Norber Wiener calls "intellectual originality" in his book The Human Use of Human Beings.

Consequently, I found it necessary to insert creativity in the system of education from the primary to the secondary level since schools play the most essential role in developing creativity. Then, I classified the obstacles which impede creativity in the educational system as well as the factors which foster it:

First: Obstructing Obstacles

1- The culture of memory makes the pupil dependent on notes and private lessons. Most tests depend on memory, on closed books, on definite or right answers, that is, on the certainty principle.
2- The explanation of subject content is presented as facts which cannot be changed.
3- Self-learning is minimal.

Second: Fostering Factors

In the culture of creativity, what matters primarily is not what the theories of scientists are, but rather, how these scientists arrived at their theories. Consequently, in order to stimulate creativity in the learner, the following guidelines are recommended:

1- To subject the content of a lesson to criticism.
2- To promote dialogue between teacher and pupil.
3- To free pupils' minds from cultural taboos.
4- To present the content of a lesson in the form of a problematic to stimulate thinking.

5- To present the subject matter as an unlimited process.

Having set the above criteria, two school books were then assessed to determine whether they impede or foster creativity. Below are the results:

First: History of Modern Egypt (published for sixth primary level in 162 pages for the school year 1985-86).

The book deals with the history of Egypt starting from the Ottoman period in 1516 passing through the July Revolution in 1952 up to Mubarak's period i.e. the period of almost five centuries. The book only lists facts rather than interprets or investigates the causes behind those facts. It is obvious that to interpret causes requires the operation of reason in drawing relations, thus allowing pupils to understand how society changes from one state to another over the centuries.

For instance on page 9, the book refers to the numerous clashes among Muslim rulers which led to the disintegration of the Islamic State. However, the reasons for the clashes are never stated. On page 16, the book also refers to the inability of the Ottomans to develop their strength without pointing out to how they had reached that state. The reader then is suddenly surprised to find the British fleet providing Aka with arms and provisions for no reason. Then on page 35, the reader is again surprised to find the governor of Aka siding with the British and not the French for no obvious reason. Moreover, there is no mention of the parallel relation between the despair of Napoleon over his Egyptian expedition and the European attack on his country. To discover the nature of the relation is important because it leads to a discovery of the real reasons. Furthermore, on page 47, the pupil is again surprised to find conflicting reasons for the emergence of Mohammed Aly. Then suddenly and on the same page the pupil is confounded with Mohammed Aly set against the Egyptian people whereas earlier he was courting their favour. Why does this sudden

change take place? How does it take place? The pupil never gets to know.

Second: Welcome to English, Workbook 1

This is the set textbook for teaching English at the first year of the preparatory level. The book consists of 16 units in 95 pages and teaches listening, reading and writing based on conversations and repetitions.

Units 1 to 4 teach the pupils the writing and the sounds of English numbers. They also teach them writing and pronouncing some Arabic names in English. For example, the following are written in Arabic and the pupils are asked to write them in English: Luxor - Kom Ombo - Suez - Sayed - Hassan - Selim - Nasr.

All drills are directed towards a set of specific instructions to be carried out automatically. So, the questions neither provoke the pupils' imagination nor their independent thinking whereas both abilities are the prerequisites of creativity. Moreover, the book lacks comprehension or interpretation questions which ultimately restrict pupils' thinking abilities. The units are isolated parts which do not form a coherent whole. The objective for such a design seems to be presumably that of teaching complete sentences or devices to form coherent sentences.

The structure of the units depends entirely on audiovisual experiences through pictures and sounds. Such presentation does not leave space for abstraction which is essential for creativity. There are no exercises which guide pupils into discovering relations between objects and abstractions because the exercises depend on conversation and repetition without any mental involvement. This is due to the emphasis on skills and not on abilities. Skills can be trained with drills and practice whereas abilities need to be developed. Skills can be learnt by students through special tactics and techniques. However, language ability which is inherent in man, requires for its development, the

capturing of mental and cultural patterns through a global approach rather than a minimalist one. The book does just the opposite. It concentrates on minute details blocking out global issues. Consequently then, the book aborts the creative process.

Furthermore, starting from unit 10, the book suddenly introduces questions without supplying model answers which is contrary to the methodology of rigid instructions used in its earlier units. This sudden jump forces the pupil to answer independently without adequate prior training in forming a complete sentence.

Again, in Unit 13, the pupils suddenly face some thought engaging activities in the form of pictures. These activities promote thought at the superficial level of describing the pictures. That is, they do not stimulate thought at the deeper level of thinking about the objects which are seen and establishing connections among them. In other words, the emphasis is on details and not on issues.

There are, however, some exercises which require finding out relations among objects. Yet, these too stifle thought since they focus on making patterned and automatic links. Moreover, the content is never presented as a problem solving activity which requires mental involvement. Finally, any form of dialogue between teacher and pupil is totally absent since instructions have to be carried out in a rigid manner.

The Project and the Ministry of Education

On October 2, 1988, I was appointed head of the Philosophy and Logic Committee by the Minister of Education, Professor Ahmed Fathi Sourour. This committee is one of the subject sub-committees of the National Centre For Examination and Educational Evaluation. Then, I proposed organizing a seminar on "Creativity in General Education" based on the above-mentioned report on creativity. The proposal consisted of probing the ability of the creative process in three areas: the curriculum, the teacher and the assessment.

The Minister of Education agreed and the seminar was held from April 9 to 12, 1989. At the opening session, Dr. Ezzat Abdel Mawgoud, the director of the National Centre For Educational Research and Development, pointed out that creativity is at the essence of the problems of education. He stressed that when we delimit the concept of creativity and the criterion for discovering the creative child, we must come out with recommendations which lead to the reform of curricula, of methods for teachers' preparation as well as lead to the introduction of new concepts into the Egyptian system of education. Moreover, when the school system can help in forming the creative personality, only then can we say that we have just started to put the educational system on track.

In my keynote address I acknowledged my appreciation to the Minister of Education for his courage to invade the backward field of education with non-conventional thought which fosters creativity rather than tradition and which favours progress rather than backwardness, at a time badly needed in our country. Then, I elaborated on the concept of creativity and emphasized that, creativity is not an easy task. It needs a theoretical framework to become accessible. And I have been involved with this theorizing for over ten years now. During that period my work revolved round the relation between man and creativity and it lead me to define man as a creative animal meaning that

creativity is at the essence of man. However, if this definition is so, the status quo is not so; and it is not so, in all fields of society in general and of education in particular. Consequently, I undertook the study of creativity and General Education with the purpose of injecting creativity into the System of Education and diagnosing areas of obstacles.

The Minister of Education then emphasized the importance of the seminar and its futuristic views for developing education by distinguishing between the culture of memory and that of creativity. He said that knowledge gives information and the only ability to get knowledge is through the faculty of memory. But in the world of tomorrow, there are other faculties that are needed. He elaborated by saying that the objectives of the educational institution are founded upon creativity. The educational objectives are all geared to:

a. Prepare the Egyptian personality which can face challenges with a futuristic outlook.
b. Establish a productive society.
c. Achieve an integrated development which requires an integrated mentality as a pre-requisite for creativity.
d. Prepare a generation of scientists trained on a scientific methodology in order to avoid mental distortions but more importantly to become pivotal in stimulating creativity.

It is obvious therefore, that the four objectives revolve round the concept of creativity. In order to foster the concept of creativity and to enhance it in the minds of students, we conceived of the examination system as the starting point. So, we laid down criteria which achieve creative thinking. Consequently, examination questions were directed at the evaluation of students in terms of their creative abilities.

Furthermore, the Minister attributed the critical spirit to development and democracy on the ground that development cannot be achieved without democracy and democracy is not possible without a critical and creative mind which contributes new additions.

After the keynote address, the research papers were read. The papers which are reviewed below are relevant to the philosophy adopted by CDELT.

Dr. Zaki Naguib Mahmoud's paper was written in the form of points and is entitled "An Opinion about creativity and the need for its development in the educational process". These points are:

* It can be safely stated that in general, the creative ability in the field of education in Egypt has been declining since after the Ottoman invasion.
* During the 16th, 17th and 18th centuries academic life was almost confined to the preservation of ancestral texts, their paraphrase and their explanation.
* New vistas of modern sciences were opened by the French expedition in the 19th and 20th centuries. Schools, institutes and universities have been established with curricula revolving on new sciences transmitted from the European West at first, then from the American West.
* When we accepted these imported sciences, we accepted only their content but ignored the scientific methodology with which the scientists had developed and had presented their thought. Consequently, a preservation of content or of scientific laws took place devoid of any reference to the processes with which knowledge had been established.
* If the educational process follows two parallel lines one for preserving content and the other for preserving what has been transmitted from the West, then these lines meet in the following manner:
  a) Both teach copied knowledge since there is no difference between transmission over time i.e. from the past, and transmission through the present i.e. from those in the west who made modern

sciences.

b) Both make use of summing up and memorization as a curriculum. Once again we say there is no difference between memorizing or preserving the heritage of the past and memorizing or preserving the creativity of westerners.

* The last point in Dr. Zaki Naguib Mahmoud's paper deals with the crisis of summing up and memorization which has reached the utmost form of corruption. There is now the booming business of summarizing knowledge in note forms which are readily memorized and regurgitated on examination papers. It is ironical that such a parrot-like behaviour enables students to score the highest marks in tests and eventually to get classified as `geniuses' in their own right.

Following the above paper, I then presented my article on the "Logic of Creativity" (see p. 3).

Then, Dr. Ahmed El-Sayed Mohammed read his paper entitled "Creativity and the Teaching of Arabic Texts". The writer uses the definition I had provided for creativity which is that of discovering new relations to change reality. He defines language as the vehicle of thought and expression. Then, he makes a link between creativity and language on the ground that the human being uses language for his thought and discovers new relations in a creative manner. The question Dr. Mohammed raises is in exploring how the Arabic language can be a means for developing the creative ability of the learner. In answering this question, the author addresses two important issues which define the skeleton of the educational system and its structure.

The first issue considers language as complementary in its units but as diverse in its teaching methods. The second issue is that language acquisition is a continuous process, the stages of which are linked with a relative relation between cognitive development and age. Hence, to make generalizations is not

fruitful. Rather, the nature of research requires delimiting the area of the Arabic language, the particular stage of the learner's development while taking into consideration that the areas of language study are complementary and that the stages of development are successively interrelated.

The writer focuses his study on the teaching of literary texts at the secondary stage. He presents several objectives. The first one argues that presenting language through a literary text enriches language itself with new expressions introduced in an interesting manner. Traditionally, linguistic expressions are fabricated to demonstrate a rule and as such become quite boring. However, when expressions occur within a literary text, they become effective and are acquired implicitly. The learner is linguistically enriched without being forced into learning. The second objective for teaching a literary text is to develop a literary appreciation since the ability to appreciate is a human faculty.

There is also a third objective that of comparison and contrast. As language is a developing organic entity, its characteristic becomes evident in literary texts as well as within the historical context of the literary text. As the literary text is a product of a specific environment, its universal features bring out its universal qualities in comparisons. In other words, the concept which a work of art tackles becomes evident in comparisons with the different natures and societies of people. As a result, the vision of any problem is deepened as many interpretations arise.

The fourth reason for teaching the literary text is directly related to creativity. Since a literary analysis looks at the artistic structures of each genre and at the critical theories behind it, then teaching literary texts helps in the formation of new artists and guides them into new creative forms. Perhaps the ultimate objective of teaching the literary text is to direct the learner to use literature as a creative potential. This orientation leads the individual either to change his environment or to reinforce its values or to add new value systems

in response to the needs of his society, and/or the needs of educated individuals in any social context.

The above are the objectives that must be realized in the teaching of a literary text. However, in Dr. Mohammed's opinion, the truth of the matter is just the opposite. The teaching of literature, as it now stands, is narrowly confined to model questions and answers. Moreover, the phenomenon of the private teacher is rampant. The private teacher provides ready-made model answers for examination-questions and is in excessive demand by both students and parents. New clichés such as `the text is abundant with feelings, overflowing in imagery, exquisite in expressions... etc!' have appeared in parrot-like fashion in most students' writings as a result of private lessons.

Dr. Hassan Shehata read a paper entitled "the culture of memory and the culture of creativity and their relation to Arabic books at the primary level". His paper attempts to explore the specific area of Arabic language books in the light of the distinction I had first made in my 1978 article "The Philosophical Basis of Education" (see p. 1) between two types of cultures . The research concludes the following:

* The culture of memory is the predominant one in the Arabic reading books as seen in 96% of the texts and 94% of the activities. The culture of creativity has only 4% for reading and 6% for activities respectively. This very small percentage offers a very limited opportunity for abstraction, problem-solving and transformation exercises.
* The culture of creativity receives a slightly higher percentage than the culture of memory in the recently developed examination questions. 55% of the texts requires mental involvement and explores new relationships. 47% of the activities subjects the lesson content to critical thought, scientific explanation, counterbalancing opinions with facts and using structural activities to discover new relations between concrete and

abstract thought. As to the culture of memory, it receives the space of 45% of texts and 53% of activities and both test the recall of information and rote learning in pupils.

* Concerning external books[1], 96% depend on the culture of memory since the content of these books is presented in definite note-forms to be easily memorized. The content constrains comprehension since it distorts knowledge by presenting it out of context. 95% of the activities in external books also deal with memorization and recognition without producing evidence.

Dr. Mona Abousenna read a paper entitled "Creativity and Foreign Language Teaching". In it, the researcher raises the following specific questions:

a) Why do we teach foreign languages in our schools and universities? What is the civilizational result?

b) What is the function of foreign languages ? Is it a creative cultural function or a mere technical and utilitarian function?

c) How can we become producers of languages and cultures other than Arabic, instead of remaining consumers? What are the cultural obstacles preventing this achievement?

d) How can we realize a dialogue between cultures through language teaching? Do the existing curricula help in realizing this dialogue? And what are the alternatives?

The researcher answers these questions by defining language as the ability of the human kind to express its cultural product in relation to others. Obviously, this definition reveals the function of language which is

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1 The Ministry of Education produces school textbooks written by a committee of specialists in each subject area. However, summaries of official textbooks are published privately. The so-called external books fragment knowledge into note forms, provide model questions and answers, and thus stifle creativity. This `booming business' which is also referred to in Dr. Mohamoud's article is located in Fagala, a district in Cairo.

predominantly a cultural one. Consequently, if one needs to learn a language - Arabic or foreign - one should not stop at its phonetics and syntax; rather, one should go beyond its structural level to discover its cultural dimension which is basically what a specific culture has created in terms of its science, its philosophy and its literature. From this perspective then, learning a language is closely related to creativity.

Hence, if we approach a language as the sum total of what a certain culture has produced in terms of thought, then the barriers between cultures are removed. In that case, language will be taught within its cultural context and as in itself a cultural product. Such an approach would stimulate the creative abilities of students in the process of exploring the potential of language as a cultural product. As creativity is the basis of the cultural product which uses language as its medium, the learner will study the origin and development of the creative process through language being a product of human thought.

However, the researcher sees that the actual teaching of foreign languages is contrary to the above view. The books used in teaching English neither develop the imagination of students nor their independent thinking both of which are important to creativity. Moreover, the books lack comprehension questions which involve mental work. The books stress skills at the expense of abilities. Skills as reading and writing can be developed through practice whereas abilities depend on finding cultural and philosophical patterns, by which she means, the creative products. These products could be used as a basis for language learning. This method, in turn, necessitates an evaluation system which depends on assessing holistic rather than fragmentary knowledge.

Abousenna concludes with recommendations concerning first the design of teaching materials based on a selection of cultural texts for the purpose of acculturation. Then, she calls for dealing with the origin and development of civilization as a unified concept with diverse cultures. Similarly, she calls for

dealing with the origin and development of science through such creative figures as Abu Bakr El Razi, Gaber Ibn Hayyan, Averoes and Galileo.

Dr. Hussein Dreeni's research deals with creativity in relation to teachers and students. He considers creativity as a mental ability that can be developed. For creativity to be developed, it requires the preparation of teachers who enjoy being creative and who develop themselves. It also requires a tolerant environment which accepts the existence of an opposite view. Moreover, it requires an interesting school climate which allows taking risks and experimenting with new ideas which ultimately develop creativity.

The obstacles which face creativity are varied. According to Dr. Dreeni, there are obstacles related to teachers who frown upon and are cynical of anything which is innovative. Such teachers insist on one correct answer and penalize students who are inquisitive. The obstacles related to the content of the curriculum are also varied. What needs to be stressed, in the writer's opinion, is the fact that there is no hope for any creativity to emerge as long as the curriculum depends totally on rote learning and memorization.

The next paper is entitled "Assessment and Creativity in Physics" by Dr. Ali El Fayoumi. He specifies the steps for training students in following the scientific methodology as essential in achieving creativity. These steps are: collecting data, analysis, organization, finding links among items, formalizing an integrated view to reach the scientific bases of certain topics and finally arriving at the stage of exploring the application of such steps.

Dr. El Fayoumi determines the prerequisites for creating a generation of critical and creative thinkers. There is no creativity without democracy and there is no creativity without scientific imagination. In physics, the researcher finds a fertile ground for developing scientific thought as well as creative imagination.

Dr. Mohammed Amin El Mofty presented an article about "The Role of Mathematics in Developing Creativity". In the article, he stresses the importance of three elements for the teaching of mathematics: content, teaching strategies and examinations. He believes that in order to develop students' creativity, the content has to start from the most general to the least general mathematical concepts using deductive reasoning.

The strategies of teaching must engage the learner in problem-solving, discovery procedures and brain-storming. The examination questions must also be of a divergent thinking and of a research nature in such a way that they evaluate the students' abilities to form structures and attempt analysis.

These three components should be carried out in a democratic classroom atmosphere where different opinions are respected, criticism is promoted and autocratic repression of ideas is rejected.

The above is the resumé of the seminar. The resumé emphasizes that creativity is the ability of human reason to establish new relations for the purpose of changing reality. This ability is available to all human beings and is not confined to a specific sphere of activity. This definition of creativity lead me to coin a new concept that of ***Mass Creativity***. Mass creativity then is another concept along other ones like ***Mass Society, Mass Culture, Mass Man*** all of which are the outcome of the scientific and technological revolution. It is also obvious that the Minister of Education wanted to embody mass creativity in the field of education. An embodiment which is much required to continue Taha Hussein's call for mass education. It follows then, that the process of education from Taha Hussein to Fathi Sourour is the process of development from mass education to mass creativity or the process of development from form to content.

Recommendations

Below are the recommendations of the seminar held from April 9-12, 1989.

1- To adopt the definition of creativity as the ability to establish new relations based on critical reasoning for the purpose of changing reality. In the light of this definition every human being is able to practise creativity and this means that we could achieve what can be called ***Mass Creativity***.

2- To coordinate between the National Centre for Educational Research and Development and the Faculties of Education and In-Service Training Centres for the purpose of promoting the creative process.

3- To establish a unit for "Creativity and General Education" at the National Centre with subject area sub-committees to inject the spirit of creativity into the educational system.

4- To organize training workshops for new cadres on creativity in General Education.

5- To design specifications for producing school text-books based on the concept of creativity.

6- To issue a ministerial decree to abolish external books and their use.

7- To organize evaluation according to two types of examination papers: one type based on memorization and the other based on creativity. The average of the two papers represents the score of the learner. Moreover, the ratio of scores for the creativity type of examination papers should be ascending in concomitance with the levels of education.

8- To introduce the "scientific method" as a subject matter in the preparatory and secondary levels of education.

9- To introduce the history of science (in physics , chemistry, biology) for the purpose of discovering the process of creativity in the scientists' minds within the cultural climate of their times.

10- To foster and promote the spirit of creativity in children specially at the nursery and the primary level of education.

11- To organize programs about creativity in the television educational programs in order to enlighten teachers, parents and students and to draw their attention to the importance of practising creativity.

12- To consider the Arabic language as the pathway to creativity with special emphasis on training students in the different interpretations of texts.

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